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MARIJUANA

AND THE BIBLE:



A CONVERSATION WITH AMERICA'S
LEADING MEDICAL CANNABIS EXPERT

FROM ONE CHRISTIAN TO ANOTHER

DR. SASHA NOE
& BOBBY HARRINGTON

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Marijuana and the Bible: A Conversation with America's Leading Medical Cannabis Expert

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RENEW

RENEWING THE TEACHINGS OF JESUS
TO FUEL DISCIPLE MAKING



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INTRODUCTION

In this eBook, Dr. Bobby Harrington talks with Dr. Sasha Noe about marijuana and the Bible. Bobby has graduate degrees in theology, including a Doctor of Ministry degree from The Southern Baptist Theological Seminary. He is the founder and lead pastor of Harpeth Christian Church in Franklin, Tennessee, and the co-founder and the executive director of Renew Network, which champions the teachings of Jesus for disciples and disciple makers.

Born and raised in Trinidad, Dr. Sasha Noe moved to the United States at age 17 where she pursued medicine and went on to become an award-winning physician and researcher. She is a dual-doctorate, board-certified, award-winning physician, researcher, international speaker, two-time best-selling author, and expert in chronic disease management, preventative health and medical cannabis—the topic we’re discussing in this eBook. For almost two decades, she has consulted and helped patients using medical cannabis; educated physicians on how to help their patients using medical cannabis; and consulted with the medical cannabis industry on how to meet the needs of both the patients and the physicians in this space.

Most importantly, she is a disciple of Jesus.

In this eBook based on an interview between the church leader and physician, Bobby shares a powerful and candid

conversation to help us see how this disciple of Christ has aligned her calling with her vocation and how her work and her Christian beliefs intersect and coexist.

Chapter 1

BEGINNINGS

Dr. Sasha, let's start at the beginning. How did you end up coming to the United States from your birthplace of Trinidad?

My family moved from Trinidad to Florida when I was 17 so that I could have access to higher education. In Trinidad, to make it to college you had to be among the richest or the smartest on the island. I was not blessed with either. We were poor, and I have always had to work very hard to succeed in school. When my family and I were able to move to the United States, the possibilities for my life seemed limitless. So, I went to college and have not stopped learning! In college I met and married the love of my life, Marc. We celebrated our 26th anniversary this year!

Congratulations! Tell us about your education track once you came to America.

After moving to Florida, I opted to attend a year of high school instead of going straight to college. I wanted to learn about how the American education system functioned be-

cause in Trinidad, I grew up under the British education system. After a year in high school, I went to college and earned my Bachelor of Science in Biology with a minor in Chemistry. Then in 1994 I pursued my master's and doctoral (PhD) studies at the University of South Florida's College of Medicine and graduated in 2000. Subsequently, after a few years in academia, I pursued what I believe to be my true calling—medicine. In 2009, I graduated from Lake Erie College of Osteopathic Medicine in Bradenton, Florida.

How did you end up focusing on medical cannabis?

After college I decided to go on to graduate school at the University of South Florida's College of Medicine to earn a master's (MS) and doctor of philosophy (PhD) in the department of Medical Microbiology and Immunology. I wanted to focus on immunology and work on a project in the department that interested me the most, which happened to be in the area on drugs of abuse.

At that time, the scientists in this department were some of only a few in the United States who had a grant from the National Institute on Drug Abuse to look at different drugs, including cannabis. That's when my journey with medical cannabis began. While most people know it as marijuana, the scientific term is cannabis. My research focused primarily on further characterizing one of the receptors in our body to which cannabis plant chemicals bind. And then to determine how that interaction functions or alters the immune system. I also conducted research evaluating how cannabinoids (chemicals from the cannabis plant) affect HIV infection and replication. With this research, I won several state and national awards. I earned my PhD in 2000.

Is this a widely studied field?

When I started in this field 24 years ago, it was not widely studied at all. However, research in this field has significantly grown, not only in the U.S., but worldwide as well. In fact, in many ways, the U.S. is behind in its research due to current federal laws. At this time, I'm the only known physician in the country who also holds a PhD in molecular and cellular cannabinoid research for almost 20 years. My research has continued to be used worldwide, cited in scholarly and scientific articles and books to advance the research of cannabis's therapeutic applications.

What initially grabbed your attention that led you to become an expert in this field?

Initially, at graduate school I simply thought, *Well, I need to focus my research on something that will keep my attention for a few years, and this is an interesting topic.* So, that's why I chose this field when I started my PhD program back in 1994—long before medical cannabis became a hot topic. In the beginning, it was more of a practical decision. However, it became medically relevant very quickly when California changed its medical cannabis laws just a few years later. Fast forward a few years after that. Once I became a physician, this field quickly became more and more relevant to my patients' health and well-being.

So, I have to ask ... were you familiar with cannabis from personal experience?

You know, just for the record, I've never used recreational cannabis. We did occasionally have a few brownies at our Friday meetings while I was in graduate school, but they were

much more Duncan Hines, than Mary Jane, if you know what I'm saying. I'm from the islands and have been to places in the U.S. where I can quickly pick up on that characteristic smell. So, no, I have never used recreational cannabis, ever, in any form, be it smokable or edible. And frankly, that smell gives me a headache—most certainly a deal breaker.

How are you involved in medicinal cannabis now?

A few ways. Currently, I have a specific clinic dedicated to evaluating patients to determine if medical cannabis use is appropriate and safe for them. This, of course, is still influenced based on what the existing state laws in Florida allow since cannabis remains federally illegal in the U.S. at this current time (though several states have legalized it). If medical cannabis is determined to be appropriate for patients, I recommend treatments and direct their care specific to their medical conditions and their medical history—within the realm of what's known about medical cannabis from a research and clinical standpoint.

I also help educate physicians on how they can help their patients using medical cannabis. I do this through my one-of-a-kind MediCanna™ Academy, which is a six-week course designed to educate doctors on how to apply the medical cannabis research to help treat their patients safely and effectively and within their state laws. It also takes them through the “nuts and bolts” of operating a medical cannabis clinic. I also provide an annual conference for physicians only, MediCannapodium™, that offers continuing medical education to doctors interested in learning how to treat patients using medical cannabis. Here, I have the opportunity to provide lectures and education. I also lecture and educate physicians and non-physicians on various medical cannabis educational

topics nationally and internationally. There is no cookie-cutter method for helping patients with medical cannabis. I don't "give them a fish," so to speak, I teach them how to "fish."

And finally, I do a lot of consultations. Physicians within Florida, as well as from other states, consult with me on patients they need help with to determine whether or not medical cannabis is a viable treatment. Physicians and patients will call me to consult about themselves, a patient, or a family member. I use social media and its outreach to educate as many as possible. Physicians have their own biases just like the public does, and my goal is to educate as many as possible on the facts, despite what biases someone may have.

I also consult with the medical cannabis industry to help them to understand how they can meet the needs of both patients and physicians. As the only known physician in the U.S. who holds a PhD in this area for almost two decades, it's my life's goal to educate and consult with patients, physicians, and the industry while developing safe, maximally therapeutic applications of cannabis. Through safe applications, we can minimize the use of opioids and other more harmful pharmaceuticals while improving overall health and wellness.

How are you currently helping patients use cannabis?

I actually have a clinic where I see patients who are looking for an alternative option to the treatment they've received thus far. As you may or may not know, in the state of Florida, medical cannabis is relatively new in the last few years compared to some of the other states. So, now we have the ability to help patients based on the laws in Florida. As a physician, if you're certified by the state, you're allowed to evaluate pa-

tients based on different medical conditions to determine if they qualify for medical cannabis treatment. I'll go into this in more depth later in this eBook.

How does your clinic enable you to apply what you've studied throughout the years?

Through my clinic, I'm able to apply decades of research and my knowledge of medicine within the parameters of the law to help patients. It's actually a very fulfilling thing for me because I'm able to help patients who have been trying for so many years to get medical help, yet are still very debilitated. They are sometimes on numerous medications. Some of them are on ten to fifteen medications—and they're still not able to really function. So, medical cannabis has provided a way to help these patients live a healthier, more active life; and to facilitate their ability to stop taking harmful or ineffective medications.

What else are you still studying about cannabis?

Currently, my research is of a clinical nature as I collaborate with groups in a few other states to help patients get off of their opioid medications. Opioid overdose can be fatal. However, it's impossible to overdose with cannabis. You can use too much, and you won't feel well. But it doesn't affect the respiratory centers in the brain like opioids do, so no one has died from cannabis overdose. You would have to inhale about 1,500 pounds of cannabis in a fifteen-minute timeframe to overdose on cannabis. That's a lot of joints, and even the most avid recreational cannabis user would find that impossible to do!

I continue to be asked to consult on research projects looking at traumatic brain injury and other medical condi-

tions not just in the U.S., but in other countries as well. I do my best to keep up with other studies going on worldwide, which is very exciting. And I have a private Facebook group exclusively for physicians where I keep them abreast of what's new in the field. The name of the group is Medical Cannabis Docs for any physicians reading this who are interested in keeping up with the latest information. There are many other cannabinoids in the plant that potentially could be helpful and other groups are continuing research to further characterize that. I do my best to keep up with as much as is humanly possible.

Chapter 2

THE PHYSIOLOGICAL FACTS

Let's dive into all the facts about medical cannabis and its effects. Can you give us a little bit about the history of it?

Cannabis has been used for thousands of years, both recreationally and medicinally. It's really only since the 1900s that this era of prohibition began. By 1970, cannabis was designated as a "schedule-1 controlled substance" in the U.S., which means there is no currently accepted medical use and high potential for abuse. Until the 1940s, cannabis was actually included in the United States *Pharmacopeia*, a compendium of drugs, and supplements etc., that physicians use as a reference book in the United States. In the mid 1960s though, delta-9-tetrahydrocannabinol (THC) was isolated. Delta-9-THC is the psychoactive component of cannabis, the chemical that produces the "high." This study started researchers down the path exploring the mechanisms by which THC makes people "high."

And as a side note of interest, in the '70s the THC content in recreational cannabis was at about three to seven percent. But over the decades, these plants have been genetically

engineered to produce THC contents well above twenty to thirty percent and in some cases, even higher. Since recreational users are looking for that “high,” they want cannabis with the highest possible THC content.

What was the result of isolating THC?

It stood to reason that if smoking cannabis produces a high in our body and THC is the psychoactive part of the cannabis plant, that there must be a specific mechanism in our bodies through which THC acts. And whatever system is in the body that the THC functions through must have some biological function that’s important to the functioning of our body. So, researchers were on the hunt for the components of this system. That foundational information was gradually unraveled starting in the ‘90s when we realized that binding sites for cannabinoids (which are the chemicals found in the cannabis plant) were discovered throughout our bodies—and that there were chemicals our bodies produced that were similar to THC. About 30 years after the discovery of THC as the psychoactive component of the cannabis plant, scientists isolated a compound called “Anandamide” (which means ‘bliss’ in the Sanskrit language). They discovered that this substance is produced in our bodies naturally and is structurally similar to THC.

So you can imagine that this discovery starts to change the facts, right? Here is something that we’ve used recreationally or medicinally or both for thousands of years; and now through research, we have begun to understand how and why cannabis works in our body.

What was so important about Anandamide?

It's important because it starts pointing us to the medical uses of cannabis. Now, this is going to get a little technical, but I'll do my best to explain it in layman's terms. As I mentioned, if you have a substance being produced in your body, it stands to reason that it must serve some purpose, right? God is amazing. He doesn't create waste. So, there's an absolute function for it. Once THC was discovered, researchers discovered the presence of receptors on our cells that the THC binds to and functions through. This first receptor was called CB1 or "cannabinoid receptor 1." Then anandamide was discovered as a chemical our bodies produced that binds to the CB1 receptor. Researchers then subsequently discovered a second receptor in the body called CB2 or "cannabinoid receptor 2." CB1 is the receptor that I did my research on. It's found primarily in the brain and spinal cord. However, it's also expressed in cells of the immune system and tissues outside our central nervous system. CB2 is found primarily outside the nervous system. While both receptors have prevalence either in the nervous system (CB1) or outside it (CB2), their receptor expressions are not mutually exclusive. And both receptors can be found at varying levels throughout the body.

Anandamide is considered an "endogenous ligand" to the endogenous cannabinoid receptors. Endogenous means that it's produced by our bodies. A ligand is a biochemical substance that binds to a molecule and makes the molecule perform a function. In addition, a second endogenous ligand was later isolated called 2-Arachidonoylglycerol or 2-AG. Researchers have found that there are mechanisms by which these chemicals work in our body that involve receptors on cells, as well as non-receptor mediated pathways. This system

of endogenous chemicals and receptors are referred to as the “endocannabinoid system.”

Over years of research, we’ve developed these facts about the endocannabinoid system in our bodies. And anandamide was the first chemical we discovered that our own bodies produced; it’s similar to THC. We’ve since discovered other potential receptors expressed in our bodies. Many decades of research put together these pieces of that puzzle to support medical cannabis use as a potential therapy for various medical conditions. If you consider the concept of a lock and key, CB1 and CB2 receptors are the locks and anandamide, 2-AG, and THC are the keys that turn the endocannabinoid system on. It is the same way that a key is needed to turn a car on. Just imagine that this is occurring on the surface of the cells in your body.

There’s a connection between our bodies and the chemicals found in a cannabis plant?

Yes. The cannabis plant contains more than four hundred cannabinoids, or chemicals, and more than sixty of those chemicals are structurally related to THC. The chemicals from the plant are called ‘phytocannabinoids’ versus endocannabinoids that are produced in our bodies. As I mentioned, THC is the psychoactive component of cannabis. Most of the chemicals in the cannabis plant are not psychoactive. When talking about medical cannabis, we most notably talk about THC and CBD or cannabidiol.

And mind you, this is a very cursory discussion of medical cannabis. It would be impossible to cover all the major research, facts, and concepts about it in just one book. The cannabinoids from the plant (or “phytocannabinoids,” as we refer to them), can act in our bodies through recep-

tor-mediated mechanisms as well as non-receptor mediated mechanisms to produce physiologic effects that can be both beneficial or harmful depending on the individual and the amounts of cannabinoids ingested or consumed. The phytocannabinoids are similar in structure to the endocannabinoids our body produces.

So, this is why the cannabis plant has medicinal value?

Yes. God in his wisdom, created a system within our body by which the components or chemicals from this plant can be helpful. We have many other instances in science where that's the case such as aspirin (for pain), digoxin (for heart patients), L-Dopa (for Parkinson's patients), Vincristine (for cancer patients) and opioids (like morphine for pain relief), to name a few. For many decades, we've known that these plant cannabinoids act within the endocannabinoid system in our own bodies. That's how we can use the plant-derived cannabinoids (phytocannabinoids) as an alternative medical treatment.

How do these chemicals binding in our bodies actually create a medicine-like response?

At the risk of becoming too technical again, let's try to take a birds-eye view of a sliver of medicine. For example, when someone has a medical condition that leads to inflammation (for example, when you've fallen and sprained your ankle), that inflammation—although meant to be beneficial by bringing cells of the immune system into the area to heal any damage—can sometimes lead to swelling and pain. That immune response can become painful, and so we take a drug like aspirin or ibuprofen to calm the inflammation and reduce the pain. That aspirin acts through a specific metabolic

and physiologic pathway in our body that is responsible for inflammation. The technicalities of that interaction are beyond the scope of this book but let's just say that every physiologic system in our body has highly complex pathways.

Cannabinoids possess anti-inflammatory properties similar to aspirin. The cannabinoids function through some of the same physiologic pathways to decrease inflammation and pain through interactions with the cannabinoid receptors, as well as through pathways that don't involve the cannabinoid receptors. CBD, for example, is a non-psychoactive cannabinoid that can be a very effective treatment for many patients with intense inflammatory conditions such as rheumatoid arthritis (RA). I have patients who have tried almost every standard of care medical treatment for RA and still remain debilitated in pain and suffering from severe side effects from the drug treatments. And when these patients use medical cannabis they can find relief of their RA symptoms. That is a medicine-like response. Since CBD is non-psychoactive, it does not make you feel "high." This is due in part to the fact that it does not bind to the same receptors that THC does. The euphoric effects can come when a person combines CBD with THC. The plant combines this naturally; medical treatments, however, can have varying levels of CBD or THC.

For many of these patients, treatment with medical cannabis can provide multiple medical benefits (decrease inflammation and pain, prevent nausea and vomiting from their medical treatments) and help keep them from taking other drugs they physically can't tolerate. This is just one example of one medical condition for which medical cannabis can be used.

The cannabis plant also contains other chemicals called "terpenes" that are the essential oils of the plants; and they actually have medicinal benefits, as well. Terpenes provide

the smell and the taste of many of the cannabis strains, and they are also found in other things we already consume or are exposed to. Some terpenes are used in homeopathic (natural) or Eastern styles of medicine. For example:

- Myrcene is found in mangoes, lemon grass, and thyme and is used for its anti-inflammatory properties.
- Linalool, found in lavender, is used for relaxation and sleep.
- Limonene, found in citrus like lemons and oranges, is used for anti-inflammatory and anti-septic properties.
- Alpha/beta-pinene, found in pine trees, rosemary, and sage, are used for anti-inflammatory, anti-septic properties that increase alertness and energy.
- Trans-caryophyllene, found in black pepper and cloves, is used for its pain relieving, anti-inflammatory, and anti-septic properties.

What are some of the most common medical uses for cannabis?

There are several medical conditions for which medical cannabis can be helpful. Cannabinoids possess anti-inflammatory, anti-oxidant, neuroprotective and analgesic (pain-relieving) properties. Some of these effects happen through cannabinoid receptor-dependent mechanisms, and some happen independently of the receptors. Conditions that can benefit from cannabis are neurodegenerative diseases like ALS (Lou Gehrig's Disease), multiple sclerosis, Parkinson's disease, seizure disorders, inflammatory bowel disease (including Crohn's and ulcerative colitis), traumatic brain injury, inflammation of our blood vessels in our body, arthritis, chronic pain syndrome, post-traumatic stress disorder (PTSD), insomnia and migraines, to name a few. We have

tens of thousands of scientific, *in-vitro* (in the lab), *in-vivo* (in animals), pre-clinical, and clinical studies that support this.

The cannabinoids can actually work at the nerve endings to modulate neurotransmitters, aid in muscle relaxation, and minimize pain in patients with multiple sclerosis. We have decades and decades of research on this in animal studies and pre-clinical trials. Even in my practice, I have patients with MS who are using medical cannabis treatment. They are in pain not only because their muscles don't work the way they used to, but these muscles are also constantly spasming. When you spasm, you're impinging on nerves, which creates different kinds of pain. Because these patients' muscles are less functional, they also lose the conditioning of their body. Their arms and their legs then become less active and weak, and that creates more debilitation. So, when we use this treatment to relax muscles and calm the pain, patients are able to be more functional, live a more active lifestyle, and just enjoy life a lot more.

Again, this is just a brief review of some of the common conditions we treat using medical cannabis very successfully. It's certainly not an exhaustive list.

Is there scientific evidence of medical benefit?

Yes. In the U.S., the vast majority of scientific evidence is found in animal models. Numerous smaller clinical studies provide evidence supporting the medical benefits of cannabis. Unless the U.S. changes its laws, research will advance at a slower pace. Until then, we rely on the studies conducted outside of the U.S. Usually in medicine, we like to see what we call evidence-based data from larger studies with randomized, double-blind (neither the participants nor the research-

ers know which participants belong to the control group, nor the test group), placebo-controlled experiments.

The evidence of medical benefits of cannabinoids has been demonstrated in a limited capacity in those typical scientific clinical studies mainly due to the limitation by the U.S. government and the Drug Enforcement Administration that still classifies cannabis as a “schedule 1 controlled substance,” along with heroin, LSD, peyote and “ecstasy.” When a drug is classified as schedule 1, it’s extremely difficult to conduct the kind of evidence-based studies in humans that physicians look to and rely upon. That lack of information can make the purists among us skeptical. A few other countries have been able to conduct more advanced clinical studies, and we refer to them as well in our approach to patients.

Chapter 3

A FRANK CONVERSATION ABOUT USE AND ADDICTION

Dr. Sasha, can any doctor prescribe medical cannabis?

Currently, we can't use the word "prescribe" because it's technically not a "medication." Physicians can only "recommend" medical cannabis treatments because cannabis is still a federally illegal, schedule 1 controlled substance. So, understand that by federal law, physicians cannot "prescribe" it. You can't go to a pharmacy to pick it up in most states. You must go to what we call dispensaries. For example, in Florida, you must have a license from the state to dispense medical cannabis treatments. And the recommendation can be obtained from a physician depending on your state laws. The availability of products varies from state to state. Some physicians will make the recommendation and say, "Here, go get the treatment and figure out what works for you."

I'm not a fan of that approach by any stretch of the imagination. That's not the way I approach any other medical

treatment for my patients, and medical cannabis is no different. I might have colleagues who disagree with me on that, however, because we don't have standard-of-care guidelines for cannabis like we do with other medicines. For example, we might say for a certain medicine, "Use this much this many times a day." We don't have evidence-based guidelines like that for medical cannabis.

However, I think most responsible physicians would agree that this treatment should be carefully managed and monitored with each patient until such guidelines exist. Every patient can respond a little bit differently. Everyone's treatment levels are slightly different, and as a physician, I actually need to educate a patient and work with them to get to the goals they're trying to achieve without walking around high.

So how do you know how much to recommend and when?

When I recommend cannabis to my patients, I advise primarily about the two major cannabinoid components, CBD and THC. Existing research does provide information that I use to determine how much and how often. Remember that the CBD is the non-psychoactive component, and THC is the psychoactive component. I recommend varying levels of CBD and THC, depending on what the patient's medical history is, what the treatment goals are, and how the patient is tolerating the treatment. Once we have a handle on those dosages, the route of administration, and how often they need to use it, we can then venture more specifically into the terpenes, or the essential oils of the plant, which means looking at different cannabis strains.

Does that recommendation vary from patient to patient?

Absolutely. In Florida, we have the opportunity to recommend the different components (CBD and THC) in different ratios and amounts, via different routes of administration or different schedules or frequency throughout the day, if you will. For each patient, it's very different and is based on the patient, their medical history, their medical conditions, and the medications they take. Often, I have people say, "Hey, I have this medical condition XYZ. Do you think I can use medical cannabis?" I usually say something to the effect of, "I've got about fifty more questions I need to ask you and have a risk-benefit conversation before I can answer your question."

So, it's not that simple. Part of my desire to educate other physicians on how to help their patients is to keep them from saying to patients, "Here, go get it and figure it out." My hope is that physicians will become educated on how they can and should approach each patient's care specifically, so they can reach safe and effective treatment outcomes.

Do some patients have to smoke it? Or can you use the oils?

Multiple forms can be used. Some inhale it. I'm a physician, and I don't recommend anyone smoke anything. Smoke is a product of combustion and has combustible by-products that are not safe. The inhaled alternative is to "vape" the product, typically a cannabis oil concentrate or the flower from the plant itself. I prefer to recommend the vaporization of concentrates from the plant to avoid any safety issues that can occur if they use the flower from the cannabis plant. The vaping process heats the product, and you inhale the vapor from the product. I don't commonly recommend this

method as a first line of use for patients. Instead, my patients will primarily either use the oils or tinctures (liquid extracts) sublingually (under the tongue) or orally (they swallow it), and they can also use patches, suppositories, or topical applications depending on the symptoms we're targeting. Patients who have really bad movement disorders like Huntington's and Parkinson's or panic attacks do better with a treatment that produces more immediate effects. So, in these cases, I recommend they inhale a vaporized product.

Is there a downside to the use of medical marijuana?

Yes. When we have patients coming in to be evaluated for medical cannabis use, we have a discussion about the potential negative aspects of it. As I said earlier in Chapter 1, I have no experience with recreational cannabis. Everything I say is completely based on my research, medicine, clinical experience, and understanding of all the available literature and information. So, again, I'm not speaking as someone who's actually ever used recreational cannabis. But what we do know is that there are negative effects (adverse side effects) to using cannabis for both medical and recreational purposes. The fact that cannabis is the most widely used illicit drug allows us to have plenty of data on the downsides of cannabis use recreationally.

Recreational cannabis is specifically designed to have high levels of THC, the psychoactive component. People that use cannabis recreationally are going for that high. That's where we start to get into more of the negative effects. People experience things like increased anxiety, psychosis, hallucinations, dizziness, and paranoia. Some people get headaches or nausea. I literally have an eight to ten-page document that I use in my practice about the potential downsides of cannabis

use regardless of whether it is for medical or recreational use. Patients have to review all the potential negative side effects of this treatment that can occur.

Even though I'm not telling patients to use it recreationally, and we're not giving it to patients so they can get high, treatment sometimes leads to a high during our determination of the most appropriate levels for a patient and result in the same effects recreational users experience. Even when we start at low doses. Some geriatric patients cannot tolerate levels of CBD despite it having less than one percent THC. At the end of the day, it's still cannabis, but medical patients are not looking for a high. In fact, as a physician if you're not careful and you advance treatment too quickly, it can cause a "high," and patients subsequently will want nothing to do with it.

The goal is to find the right level where it's therapeutically safe and effective. We also have retrospective studies in which we've looked at tens of thousands of patients who have gone to the hospital. We see that recreational cannabis users have an increased risk of cardiac events or stroke, which are very serious "downsides," if you will. Not to mention issues with abuse, dependency, or addiction, even though the incidence of those issues are low.

So yes, there are downsides (adverse side effects) to both medicinal and recreational cannabis use, just like with any drug. When we start talking about dependency, abuse, and addiction, that encompasses a smaller percentage in a practice like mine (family medicine). But if you have a population of individuals who struggle with these issues (psychiatry and addiction medicine), those issues affect a larger percentage of your patients.

Let's just get black and white here. Do people using medical marijuana get high or not?

I know you want a black and white answer, but this is not a black and white issue. The answer is yes and no. Let me clarify what I mean by that. As I mentioned earlier, we do use THC for treatment of many medical conditions. In some patients, we must use higher levels of THC. For example, patients who have Parkinson's or Huntington's Disease have very abnormal, involuntary movements due to a dysfunction of their nerves and neurotransmitters. They tend to require higher levels of THC to calm the symptoms of those involuntary movements. So, some of those patients feel altered and their body and mind could be experiencing a high; however, this is not necessarily the case. THC treatment can be used without feeling high. For the vast majority of patients, the answer is no. And for some, the answer is yes. In those cases, we work together to cut back on the dosage if they are feeling high.

Consider the alternative, though: Huntington's Disease is terminal. If you've never seen a patient with advanced Parkinson's or Huntington's, you should look it up. It is devastating to have continuous movements of your entire body that you have no control over. Those are the extreme cases, and they need higher levels of THC. So, while patients might feel altered, their symptoms are being managed where standard-of-care medications have failed them. This constant degradation of their nerves keeps every body part moving involuntarily. So, some patients may feel a "high," or their body could technically be in a state of a "high," especially if they use it for a movement disorder or they have increased THC contents they use at night to sleep. For the vast majority of

patients, though, medical cannabis treatment doesn't cause a "high." They want to function and not feel altered.

With regard to getting high, let's consider medical cannabis use for insomnia (difficulty with sleep). Technically, these patients' bodies are in an altered state because we're using it to help them sleep because we are using a known side effect of cannabis use, which is drowsiness. There are also prescription medications for insomnia like Trazodone, Gabapentin, Ambien, Xanax, Valium, Lunesta, and opioids that alter you—they put you to sleep. A case could be made that those typical prescription medications are putting you in an altered state or a state of a "high." Higher CBD or THC treatment levels that patients use at night also help them sleep—very much like those medications that physicians may prescribe for sleep.

So even medical cannabis can have an adverse side effect and we capitalize on that in medicine to help patients with sleep problems. It can make you sleepy. This is a benefit for those who have insomnia caused by pain or other medical conditions. I mentioned Trazodone and Gabapentin above. Those medications are usually used for depression and nerve pain respectively, and the adverse side effect is that they make you sleepy. So, they're also used for insomnia. So, the answer to your black-and-white question is yes and no. The purpose of medical cannabis is not to make you feel "high," but technically we do put your body in a "high" or altered state when we have to use higher levels of the treatment.

So, some patients can use medical cannabis without experiencing a high?

Yes, most definitely. The vast majority of patients using medical cannabis do NOT experience a high. I see it all the time

in my practice. Many patients are able to use cannabis treatments and not be high. Many of these patients have to still work and support their families, and they are certainly not using the treatment to get high. Some have been homebound in pain, while taking high levels of opioids or other ineffective medications, and now they are either off their opioids or on significantly lower doses of opioids. They're functioning and doing their own yard work, visiting family members they have not visited in ten years. I have only had a couple of patients who experience a high from using just the CBD products (containing extremely low percentages of THC), and for those patients this is not a treatment option for them. So, it's discontinued.

What are some of the specific dangers with recreational use? Do we see those with medical use?

As I mentioned above, people can experience things like increased anxiety, psychosis, hallucinations, dizziness, paranoia, headaches, or nausea, which is why my informed consent paperwork is almost ten pages. Short-term memory and cognition are impacted with recreational cannabis use. If that person decides to get behind the wheel and drive, or maybe they have a job that requires them to be fully aware and present, and don't have all of their cognitive function intact, that's dangerous.

When you're talking about recreational use of cannabis, if you get dizzy, you can fall and this is also that risk for medical use of cannabis. Especially if you're an older patient, a fall can increase your risk of breaking your bones. It's a fact that cannabis can dilate your blood vessels, and that in turn can lower your blood pressure, which can be detrimental depending on your situation. In the medical setting, some patients who are

on medication for high blood pressure must be careful because the addition of medical cannabis on top of those medications can cause their blood pressure to drop too low. I've worked with other doctors to help decrease a patient's high blood pressure meds while on medical cannabis treatment. So, those are some specific examples.

To recap, not everyone can use cannabis and have a desirable and non-harmful experience. People can have the above adverse reactions with both recreational or medical cannabis use.

Are there long-term effects for recreational use?

There are concerns for long-term effects for recreational cannabis use in the medical community. The medical literature on this can sometimes be divided on this subject. Cognitive deficits that are seen with heavy recreational cannabis use for the short term appear to be reversible when cannabis use stops. Typically, some of the longer-term effects that we see with recreational cannabis use happens in individuals who started to use it in adolescence at higher levels. When recreational drug use starts in adolescence, this is where a major part of the risks occurs as it can hinder brain development. The rational part of the brain (pre-frontal cortex)—responsible for organized and logical thinking, decision-making, attention, impulse control, reasoning, risk management, personality development, and short-term memory—is fully functional by age 25, although some scientists have indicated our entire brains are not fully developed until our 30s. There are research findings that indicate long-term cannabis use is hazardous to the white matter of the developing brain. Delaying the age at which regular use begins may actually minimize the severity of this kind of impairment. When they start

recreational cannabis at a young age, individuals who are already predisposed to any kind of family history of mental health disorders, substance abuse, dependence, addiction, or negative social and environmental factors may set themselves up for mental health disorders and substance use disorders. Of note, medical cannabis would of course be cautiously advised, if at all, in this population anyway. So, from my perspective as a physician, recreational drug use in adolescence for any drug or at any age is not recommended.

This is a major concern for me in places where recreational cannabis is legal and cannabis use might be seen as “normalized” in those adolescent years. If they continue to use recreational drugs, long-term effects will likely be seen. Just like the long-term effects of alcohol abuse, the long-term effects of cannabis use will become even more apparent with the legalization of recreational cannabis in the U.S. Research does show that individuals, once they get past their 20s to early 30s, discontinue cannabis use since it can affect some people’s ability to function productively.

Apart from those with substance abuse problems, is medical cannabis safe?

I would love to say with absolute certainty yes or no. It’s just not that simple. I can tell you that for many individuals, medical cannabis is a safe, effective alternative under the care of a qualified physician. We can improve a patient’s health and well-being, and their overall functioning. We can address this issue of “poly-pharmacy,” which occurs in patients who are prescribed medication after medication for their conditions, as well as being prescribed medication to treat the side effects of the medications they’re taking. However, many times

the poly-pharmacy that we see occurring is not effective for many patients.

In addition, we can really reduce opioid and benzodiazepine overuse. These drugs can have lethal side effects, especially if a patient overdoses. I see patients like this all the time, and I feel it's an honor and a privilege to help as many patients as I can by providing this alternative.

Individuals who self-medicate with cannabis are taking a risk with their health. I don't recommend it. No more than I would recommend someone Googling the symptoms of a potentially complex problem and buying home remedies or supplements to treat themselves. The internet is a wonderful thing. We have tons of information at our fingertips. But if you're not a physician or health care provider, you're likely going to make an ineffective and potentially dangerous choice going that route.

Additionally, I have also evaluated patients who want to use medical cannabis as an alternative treatment, and I have advised against it based on their medical history. Or because the risk outweighed the benefit depending on the patient's medical condition or medical history at the time. There are certainly instances where it can be detrimental, and that can only be determined once I have personally interviewed and examined a patient and have thoroughly reviewed their medical history. The nuances of those decisions are best left to a physician and they're definitely beyond the scope of this book. We'll just end this question with the fact it's not always appropriate for medical use.

Can medical cannabis become addictive?

Yes, it has the potential to become addictive in a small population of patients compared to the whole population. Psy-

chologically speaking, addiction is a disease that's a manifestation of the progression of substance abuse. At the risk of oversimplification, patients who abuse substances might still have some control over parts of their lives while those with addiction experience adverse effects in many aspects of their lives. Physicians who work in psychiatry or addiction medicine see individuals with these behaviors all the time, and there is a subset of the population that can become addicted with recreational use. Based on reports out of the National Institute on Drug Abuse, recreational cannabis use is approximately equivalent to the addiction potential of caffeine.

I have patients who come to me who have been using recreational cannabis for a long time (daily use of multiple joints a day for years), and it doesn't take very long for me to recognize a patient is already abusing and has become dependent on cannabis. I promptly refer those patients to an addiction specialist.

Unlike recreational cannabis use, no studies have been done on the addiction potential of medical cannabis use. However, addiction is highly unlikely. Consider that alcohol and caffeine use have more addiction potential than recreational cannabis use. So, medically, in patients using much lower levels of cannabis, that concern is negligible. I have specific treatment strategies I use with patients to avoid any concerns for tolerance, abuse, dependence, or addiction.

Even though cannabis is the most widely used illicit drug in the United States, you need to know a couple of things. Alcohol use is more addicting and intoxicating than cannabis. We're used to people drinking alcohol, so we can swallow that pill a lot easier than if we hear our brother or sister is using medical cannabis. How many people come home to have that glass of wine or two at the end of their day? So, alcohol use has been normalized, and it, in fact, is more addicting

than cannabis. That doesn't discount cannabis' addictive potential. We just need to put the information into perspective.

What if marijuana is illegal in my state? Can I still use it medicinally?

No. If it's not legalized in your home state, your only option is to move to a state where it is legal because it's federally illegal in the U.S. to obtain it in another state and bring it to your home state. That's breaking the law.

So, I make clear to my patients who qualify for cannabis: "You cannot cross state lines with your treatment, because then it becomes a federal issue and you are breaking the law." They are advised that the only reason they can use this treatment in this state (Florida) is due to the state laws. So, unfortunately, if a patient lives in a state where marijuana is illegal, their only option is to move to a state where it's legal. There are about half a dozen states that might offer reciprocity under very strict rules if you have been certified in another state. So, you better know those laws if you go there. And if you transport cannabis by car or plane across a state line to a state that doesn't offer that reciprocity, plain and simply, you're breaking federal law.

Some individuals try to use the hemp-based CBD. Hemp is a cannabis plant, but it's grown for other uses (fabric, paper, food supplements, etc.), and it typically has higher levels of CBD and very minute amounts of THC (less than 0.3 percent THC to no THC). Any cannabis that has more THC than .3 percent is considered psychoactive from a legal standpoint. So, hemp CBD is legal technically and it's kind of complicated to go into, but let's just say we have a federal farm bill that allows hemp-based CBD use. Many people turn to that option. I strongly caution patients about over-

the-counter (OTC), hemp-based CBD products for several reasons despite what a product advertises:

1. You have no idea about the safety profile and safety testing of that supplement.
2. You have no idea about the product consistency testing.
3. Unless you're highly educated on what this all entails and looks like in reality, you have no guarantee whatsoever that you're getting what you pay for and that it's safe.
4. If you're a patient who is at high risk for immune system compromise, you could be making a critical, life-threatening mistake.

The OTC products have no standards they need to meet. Unless you know what the right questions are and can vet a product effectively, you're taking a gamble. To patients who say that they have used an OTC CBD and it didn't help, my response is typically something to the effect of "just because it didn't help you doesn't mean medical cannabis will not help you." The OTC CBD market is becoming like the billion-dollar supplement industry. There are plenty of options, and you don't always know what you're getting.

So, to summarize, if cannabis is illegal in your state or its legal in your state but you are obtaining it from a source other than what your state law allows, you're using it illegally. For Christians, it's necessary to heed warnings like what Paul gives about submitting to the laws of the land:

Romans 13:1-5: Let everyone be subject to the governing authorities, for there is no authority except that which God has established. The authorities that exist have been established by God. Consequently, whoever rebels against the authority is rebelling against

what God has instituted, and those who do so will bring judgment on themselves. For rulers hold no terror for those who do right, but for those who do wrong. Do you want to be free from fear of the one in authority? Then do what is right and you will be commended. For the one in authority is God's servant for your good. But if you do wrong, be afraid, for rulers do not bear the sword for no reason. They are God's servants, agents of wrath to bring punishment on the wrongdoer. Therefore, it is necessary to submit to the authorities, not only because of possible punishment but also as a matter of conscience.

In short, Christians are directed to obey the laws of the land and cannabis falls under this.

What if you live in a state where cannabis is legal?

In some states, only medical cannabis is legal; and in some states it is both recreationally and medically legal. I would advise anyone considering cannabis use to know your state law. In Florida, for example, only medical cannabis is allowed and under very specific circumstances. You actually have to find a state-certified physician to recommend cannabis (they have taken a certifying state exam), and that physician has to determine if you meet the conditions approved by the state law. If you qualify and become a medical cannabis certified patient, the cannabis can only be obtained through a licensed medical marijuana treatment center (dispensary), highly regulated by state law. And that is how you do it legally in Florida. Each state does things differently.

Each individual is responsible to know their state's law. It's not that an individual can decide, "Oh, I have PTSD, I now qualify for cannabis in Florida. I could go to the guy

on the corner and get some cannabis off the streets or from a friend and I'm covered." No, that's not the way it works. As I referenced above, Romans 13:1-5 puts the responsibility on us. So, let's not forget that.

Dr. Sasha, if medical cannabis works, why is there so much controversy around it?

First and foremost, it is still a federally illegal drug in the U.S., and it is still classified as a schedule 1 controlled substance by the Drug Enforcement Administration (DEA). This is despite the state laws that allow use for cannabis either recreationally or medically. So, therein lies some of the controversy. A state may allow it but the federal laws considers it illegal, which presents a concern for a plethora of reasons, for patients and physicians.

Second, as physicians we have been taught that we need to follow evidence-based medicine. Some physicians refuse to even consider the tens of thousands of existing pre-clinical and clinical studies because they don't meet those criteria to the purest and highest level of evidence. Additionally, both physicians and the public have personal biases, which could stem from their own experiences with the drug recreationally (either themselves or a loved one), or they may have biases based on their cultural or religious background. Or they were simply raised in the, "Just say no to drugs" era. While cannabis is still a federally illegal drug, for those individuals there is no looking beyond those biases to see the scientific and medical facts.

These are just a few of the possibilities. Many have also bought into this idea of cannabis being a gateway drug when in fact, substance abuse is a much more highly complicated subject. The belief that cannabis use will lead to other

drug use is a gross oversimplification. Genetic, medical, environmental, and social factors play a tremendous role in the setting of substance abuse. Despite cannabis being the most widely used illicit drug in the U.S., less than 10 percent of users advance to drug dependence. By the way, that is about the same percentage of people that become dependent on caffeine. Most individuals who experiment or use cannabis recreationally end up discontinuing its use in their 20s or early 30s. This may have something to do with brain development, which I talked about earlier.

And finally, there really is a spectrum of belief about medical cannabis. We can look at the spectrum where on one end people say, “Oh, there’s absolutely no medical benefit whatsoever. It’s bad for you. Don’t use it. There’s nothing good about it.” And on the other end of the spectrum is where some say, “Oh, it’s completely safe for everyone to use. This is a great medicine. It’s a miracle drug.” Both ends are inaccurate. It’s not completely safe for everyone, and there are medical benefits to it.

To add to the confusion, there are two forms of cannabinoids that are currently approved by the FDA for medical use. There is a synthetic THC capsule called Marinol™ (available for over a decade) that is used mainly for chemotherapy-induced nausea/vomiting in cancer patients and anorexia or weight loss in AIDS patients, which by the way, has been determined by the Drug Enforcement Administration to be a “schedule 3 drug” (which means that it has a moderate to low potential for physical or psychological dependence).

I have had a few patients on hospice use it to help with their decreased appetite from cancer treatments, and they have actually done well and been discharged from hospice because their health had improved. More recently, Epidiolex™ is a pure plant-derived CBD product that has been

FDA-approved for treatment of seizures associated with Lennox-Gastaut syndrome or Dravet Syndrome in patients aged two years and older. They have not determined what schedule Epidiolex™ will be. That decision is expected within the next few weeks.

The controversy and confusion are not a surprise when the U.S. government on the one hand says that cannabis has no medical benefit, yet we now have two FDA-approved drugs indicating otherwise. And you should also know that since 2003, the federal government itself owns a U.S. patent relating to the use of cannabinoids as neuroprotectants and antioxidants.

From where I stand, there is no controversy about the medical benefits of cannabis in certain situations. Individuals in my practice experience benefits from it without adverse effects. It is just a matter of time before the controversy ends and more clarification on risks-benefits can be accurately made from a medical and research standpoint.

Have you treated any Christians with medical cannabis?

Yes, many. Just to give you one example, I have a patient who actually used cannabis for medical reasons, and he stopped using it when he became a Christian and a pastor of a church. It was medically illegal where he lived, and he was diagnosed with MS. He had been using cannabis to treat his MS symptoms illegally before he became a Christian. It has been twenty years now since he has been a pastor, and medical cannabis is now legal in Florida for patients with MS. So, he came to me and said, “Look, is this applicable for me from a medical standpoint?” He wanted to know if I would recommend that he use the medical cannabis treatment. After a one-hour evaluation, I said yes. Given the evidence supporting canna-

binoid use in MS, we embarked on this journey together, and I directed his treatment recommendations.

Of course, we had an in-depth spiritual conversation as well and after only five months on the treatment, he experienced tremendous benefits. He has been on the treatment now for almost two years. He is off all of his opioid pain medications, which he had to take four to five times a day, along with muscle relaxants he took three times a day. He's not taking any of those anymore, and he's not walking around altered or under the influence or anything like that. He is really living a life that's much more fulfilling and active.

What's the process of getting a patient off other medications and on to using cannabis?

Once we have found the most effective dosages of cannabis to safely treat their debilitating symptoms, we can begin the process of weaning off patients from medications that may no longer be needed or that are more harmful than medical cannabis like benzodiazepines (Xanax, Valium) and opioids like Hydrocodone, Oxycodone, Morphine, and Fentanyl. This is done in conjunction with their other physicians or specialists.

We see a lot of patients who are coming off of their opioids because medical cannabis can manage their pain in a more effective way, in a less mind-altering way. Of course, you don't have the side effect of death from overdosing like you do with high-risk opioids and benzodiazepines.

So that's how I'm able to help patients, and it's actually incredibly fulfilling to me that for most of the patients who come into my clinic, I have the ability to work together with them toward their health goals. It's very fulfilling. It's amazing and very humbling to see how God has directed my life.

Chapter 4

FAITH AND CALLING

Let's talk more about your faith. In addition to being a PhD, you're also a Christian. Tell us about your journey with Christ.

You know that Scripture that talks about how God sets eternity in the hearts of men in Ecclesiastes 3:11? Well, from a very young age, I really knew that the Bible spoke to me. There was something inside of me that told me that this is God's inspired Word, and I made a decision at a very young age that the Bible was going to be the standard for my life. Needless to say, I struggled with that decision throughout my teen and young adult years where I fell short of that standard. I would have to say that back then I was more religious than spiritual. I tried to follow "the rules," and I missed the mark a lot.

When I was in graduate school I experienced a time where I was very vulnerable in my life and in my marriage, even though I was very religious. If you looked at me from the outside, you would see that I went to church twice a week, was involved in different programs and Bible studies, and sang in the choir... all that "good" stuff! Yet my life was

just in a really rough place... in shambles, really. In graduate school, I was very unhappy in my marriage—with my life. My husband and I were three years into our marriage.

Then one day, I was invited to a women's program through a local church. When I heard the speaker talk about having a "brave heart" for God (based on the movie *Braveheart*), all I could do was cry. That night, God revealed himself to me like never before. I realized that I didn't have the relationship with God I had craved from a very young age. I decided to completely turn my life and my heart around. The next morning, I started studying the Bible with some women I met that night. Then, I studied the Bible with them for hours every day, and these women gave me insight into God's love and his desire for a deep relationship with me. They showed me what the Bible said about being a Christian, a follower of Christ, and a disciple of Christ. These women truly loved God; they lived their lives as disciples of Jesus Christ, and they were a light in my life at a time I really needed it. I was baptized a week later and decided to make Jesus the Lord of my life. My husband also started to study the Bible, and he was baptized one week after me. My life was radically transformed. It's mind-blowing to see how God used that time in my life, because at the time, prior to becoming a devoted disciple of Jesus, I actually was very much still focused on selfish ambition, becoming a "doctor," and doing research in the proverbial ivory tower.

Had I not received God's message of the gospel at that time, I shudder to think where my life would be right now. Marc and I have been blessed with two incredible kids: Ethan, 19, and Carissa, 17. And we have been part of the same church now for twenty-three years (Anchor Point Church in Tampa, Florida). We have deep relationships in our church with brothers and sisters who encourage each other on our

Christian walk through life's victories and challenges. We have served in various capacities as the children's ministry leaders for almost a decade, I have served on the board for the church, we currently lead a small group "house church," and I still get to sing with our worship team occasionally when my schedule permits. God has blessed me beyond anything I could have ever asked or imagined!

Did your faith and your career ever get in the way of each other?

Once I became a disciple of Jesus, I almost quit getting my PhD. A few years after I became a Christian, my husband and I had Ethan, and my priorities shifted from a completely worldly perspective to a more godly perspective. I wanted to be able to stay at home and take care of our son. I remember thinking, *Oh, I just want to love God and be a great wife, and mom.* So, I seriously contemplated quitting graduate school. Getting my doctorate just didn't seem important to me anymore.

However, some of the very close women in my life were like, "Look, Sasha, you're really close. Don't quit. You're going to regret it if you do." I decided to accept that advice and trust God through the process. It's amazing to look back on all these years to see the plan God had for me, because now I get to be here and share my story because of my expertise.

Have you always maintained a positive and clear outlook about your faith and your medical pursuits?

I wish I could say yes, but that wouldn't be accurate. A few years after completing graduate school, while working in academia, I started to feel like there was more to my purpose than what I was doing. Since college, I had dreams of becom-

ing a physician. But I was very insecure about my capabilities and didn't think I was smart enough to become a physician. That's why I went to graduate school. At this point in my life though, I was 31 and had been blessed with a great marriage and kids. I wondered if being in academia was where I was meant to be for the rest of my career since I was feeling "stuck."

After much prayer and advice, I decided to start shadowing at a local emergency room and within a few weeks of that, I again felt an intense desire to become a physician, to help and serve people in such a special way during their most vulnerable times in their lives. So, I begged God to direct me to his will. I actually begged him: *Please, God, shut the doors if this is not your will for my life.* I knew this would take a toll on my family and committed to not embark on this path unless I felt God clearly saying this was his purpose in my life and not just a selfish desire. At each step along the way, I sincerely and wholeheartedly continued to beg him to shut the doors if he didn't want me to become a physician.

To my amazement, the opposite happened. He literally opened *every door* almost as if to declare, *Sasha, yes, this is your specific purpose.* I applied to medical school and received my acceptance letter three days after my interview. So, my journey in medicine began. I was in school again! Boy was that tough! On the days I felt overwhelmed with school, I would pray, *God, I know you are the reason I am here, and I need you to, help carry me through.* I knew I was not going to fail because he was the one that made this happen. Before I knew it, I had graduated medical school, did my residency and was the hospital's chief intern and chief resident—that was God! Marc helped me work towards opening up our first medical practice straight out of residency in our small town. Wow! Talk about surprises from God.

Life can be a rollercoaster, and while I have had many victories in life, I have also had low points as well. I actually hit one of my biggest lows a few years ago. I needed to have my gallbladder removed. What should've been simple and straightforward was anything but. My life changed forever. I actually experienced and suffered every complication one can have from that procedure. Really, they were textbook complications to the point that I was fighting for my life in an intensive care unit with bile peritonitis and sepsis.

The pain was some of the most excruciating pain you can experience medically. I was on massive loads of opioids and had a morphine pump that I could use every seven minutes, yet I was screaming in pain every four minutes and having to wait another three minutes to get more morphine seemed like an eternity. It was unbearable, and I felt like I didn't want to live due to the pain. I laid in bed begging God, saying, *God, please take me home with you. I know this will be difficult for Marc and the kids, but I can't handle this pain anymore. I'm ready to come home. Just take me. This is too painful.* But you know what? He actually had other plans. He was like, *Nope, you're staying here. My work for you is not done.*

So, I get to be talking to you and your readers today with a deep understanding of suffering I had never known before going through one of the worst medical pain experiences you can have. And I am also here today as someone who was given a second chance at life. Well, guess what? I'm filled with fire, now more than ever, to make sure that everything I do is glorifying to God and that I'm able to help as many people as I possibly can. From a personal and professional standpoint, this is my goal!

Chapter 5

THE RESPONSE OF THE CHURCH

How could or should the church respond or embrace this issue?

As Christians in our churches, we will be faced with both recreational and medical cannabis use. It's inevitable. As we're helping people with their spiritual walk, some of these individuals will have very serious medical conditions, and some might benefit from medical cannabis. Some individuals, though, may have turned away from a life of substance abuse, dependence or addiction, or they have serious mental health conditions. This can be a very complicated road to navigate.

While medical cannabis can be helpful to some, recreational use can lead to abuse, and individuals can become dependent or addicted to cannabis. Many disciples in our churches have little to no experience helping others navigate this type of complicated mental health journey. So, in those instances where Christians have struggled with abuse, dependency or addiction, or who have complicated mental health conditions, I advise having them seek the help of both a professional therapist and a physician, especially if they're considering medical cannabis as a treatment option.

For those individuals who don't struggle with any of the above conditions (and statistically that's the majority of the population) and who choose to seek medical cannabis treatment as an alternative, I believe we should keep an open mind to follow the biblical examples of compassion, love, and discernment that we are called to have for a brother or sister who is being treated with any other medication or intervention. Here are some Scriptures that can guide us in this regard:

- Psalm 145:8-14: "The LORD is gracious and compassionate, slow to anger and rich in love."
- 1 Peter 3:8: "Finally, all of you, be like-minded, be sympathetic, love one another, be compassionate and humble."
- 2 Corinthians 1:3-4: "Praise be to the God and Father of our Lord Jesus Christ, the Father of compassion and the God of all comfort, who comforts us in all our troubles, so that we can comfort those in any trouble with the comfort we ourselves receive from God."
- Colossians 3:12: "Therefore, as God's chosen people, holy and dearly loved, clothe yourselves with compassion, kindness, humility, gentleness and patience."
- Philippians 1:9-10: "And this I pray, that your love may abound still more and more in real knowledge and all discernment, so that you may approve the things that are excellent, in order to be sincere and blameless until the day of Christ."

So as a church, let's *not have* a knee-jerk reaction or condemn those who are trying to get help medically with cannabis. Let's know the facts and try to use our spiritual wisdom

and discernment to help our brothers and sisters if there are any concerns. Ask lots of questions and provide a non-judgmental, safe place during these discussions. Let's have the heart of God—he is the one the brokenhearted come to, and he binds up their wounds. Let's be the source of a spring of refreshment for our brothers and sisters who suffer with chronic medical conditions.

If you're the one using medical cannabis, the Scriptures urge us to keep a clear conscience at the end of the day. We are responsible for our actions before God.

Here are some Scriptures to guide you:

- James 1:19: “My dear brothers and sisters, take note of this: Everyone should be quick to listen, slow to speak and slow to become angry.”
- Psalm 147:3: “He heals the brokenhearted and binds up their wounds.”
- Psalm 145:8: “The Lord is gracious and compassionate, slow to anger and rich in love.”

What are some other biblical principles that apply to this issue?

I'd like to point out that there are biblical principles that hold true in consideration for medical cannabis—principles that apply to all walks of our Christian life. It doesn't matter whether it's use of medical cannabis, or any other type of prescription pharmaceutical drug. 1 Peter 5:8 tells us, “Be alert and of sober mind. Your enemy the devil prowls around like a roaring lion looking for someone to devour.” So, this is one of the things we have a responsibility to remember.

One of my favorite Scriptures is Romans 12:1-2:

Therefore, I urge you, brothers and sisters, in view of God's mercy, to offer your bodies as a living sacrifice, holy and pleasing to God—this is your true and proper worship. Do not conform to the pattern of this world but be transformed by the renewing of your mind. Then you will be able to test and approve what God's will is—his good, pleasing and perfect will.

In the Scriptures, we're urged to offer our bodies as living sacrifices, holy and pleasing to God. And we're also urged to not conform to the patterns of this world but to be transformed by the renewing of our mind. In places where cannabis is legal, this Scripture is one I encourage Christians to hold on to because the temptation will be to say, "Hey, it's legal to consume cannabis recreationally. I am not breaking the law. So, it's okay."

Yet, the psychoactive influence of recreational cannabis goes against the Scriptures like 1 Peter 5:8 and Galatians 5:19-21:

The acts of the flesh are obvious: sexual immorality, impurity and debauchery; idolatry and witchcraft; hatred, discord, jealousy, fits of rage, selfish ambition, dissensions, factions and envy; drunkenness, orgies, and the like. I warn you, as I did before, that those who live like this will not inherit the kingdom of God.

Instead, we are to live a life that reflects the fruit of the Spirit, as Paul writes in Galatians 5:22-25:

But the fruit of the Spirit is love, joy, peace, forbearance, kindness, goodness, faithfulness, gentleness and self-control. Against such things there is no law. Those who

belong to Christ Jesus have crucified the flesh with its passions and desires. Since we live by the Spirit, let us keep in step with the Spirit.

These are a few biblical concepts that don't change no matter what we do in life, and cannabis use, whether its recreational or medical, isn't any different.

I believe that these Scriptures can be considered and discussed as we have talks with individuals in our churches who either may be using medical cannabis or may be considering recreational cannabis use. These can be difficult discussions, and many of the churches in many states are already having these conversations. My prayer is that the conversation can happen with prayer, discernment, and asking a lot of questions before you make judgments or offer advice.

How might this issue affect those with a history of substance abuse?

The use of medical or recreational cannabis is a serious concern with those who have a history of substance abuse. As I mentioned earlier, there are those in our congregations or those with whom we're sharing the gospel who have a history or struggle with drug abuse, dependence, or addiction. And it's in these populations, in particular, I would say we have to be extremely cautious and encourage them to seek the care of an addiction specialist and therapist because it can be a complex road to navigate.

We must really approach it with a lot of wisdom and discernment because the use of medical cannabis can be a slippery slope for those in this predicament. Marijuana abuse does exist. Studies show that adults seeking treatment for marijuana abuse or dependence are those who tend to aver-

age more than 10 years of near-daily use and more than six serious attempts at quitting.

The *DSM V* or *DSM 5: Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition*, is like a “Bible” of sorts for mental health disorders. It recognizes substance-related disorders resulting from the use of separate classes of drugs, and cannabis is one of them. There are signs of substance abuse that those who are in a close relationship with someone who has substance abuse concerns can recognize. Below is an excerpt:¹

“Substance use disorders span a wide variety of problems arising from substance use and cover 11 different criteria:

- Taking the substance in larger amounts or for longer than you’re meant to.
- Wanting to cut down or stop using the substance but not managing to.
- Spending a lot of time getting, using, or recovering from use of the substance.
- Cravings and urges to use the substance.
- Not managing to do what you should at work, home, or school because of substance use.
- Continuing to use, even when it causes problems in relationships.
- Giving up important social, occupational, or recreational activities because of substance use.
- Using substances again and again, even when it puts you in danger.
- Continuing to use, even when you know you have a physical or psychological problem that could have been caused or made worse by the substance.

¹ Accessed September 20, 2018, <https://www.psychiatry.org/psychiatrists/practice/dsm>.

- Needing more of the substance to get the effect you want (tolerance).
- Development of withdrawal symptoms, which can be relieved by taking more of the substance.”

If you or someone you know is experiencing any of the above problems from any substance, including cannabis, I would recommend that you consult the advice of a physician or addiction specialist or both in addition to a therapist who specializes in substance use disorders.

What’s your interpretation of how using marijuana is depicted in the Bible?

There is no specific or clear biblical answer to this question so we have to use Scriptures to guide us. As with any issue on which the Bible is silent, we should exercise caution to not over-interpret Scriptures and be cautious of not being judgmental of others. That being said, there are some Scriptures that can guide us.

Personally, a Scripture that comes to mind is in Ephesians chapter 5, the Apostle Paul is teaching the church in ancient Ephesus. He’s been teaching them about God’s way, and in Ephesians 5, starting at verse 17, he’s summing things up, and he has this great description: “Therefore do not be foolish, but understand what the Lord’s will is.” So, live a life where you’re trying to please God and you understand his will. Verse 18 tells us, “Do not get drunk on wine which leads to debauchery, instead be filled with the Spirit.”

The Scripture here refers to getting drunk on wine. And when people use the word “drunk,” they rightly think of alcohol. One can ask, is the warning against alcohol or against being drunk? There are several Scriptures that speak about drinking alcohol and being drunk. And we know that Jesus

drank wine, so the issue is likely not the alcohol but the state of being drunk. Synonyms for drunkenness are words like “tipsy,” “impaired,” and “under the influence,” to name a few. So, I personally consider that the concept of being “drunk” likely does not stop at alcohol use.

Now, maybe a true Bible scholar has a different take on that, and I might be over-interpreting this Scripture because I am not a Bible scholar. So, in my non-biblical scholar interpretation, this is a state of mind, and that altered state of mind can occur with other drugs. Some prescription drugs can produce that mind-altering state.

I do believe that when it comes to medical necessity, God looks at the heart of the matter. Someone who is legitimately getting medical help and has to take a prescription medication or medical cannabis is in a different predicament than someone using prescription medications or recreational cannabis to purposely be “impaired,” “tipsy,” or “under the influence.”

If we’re concerned about someone’s actions, then we can ask thoughtful non-judgmental questions to help them think through:

- where they think they stand with their conscience on this matter;
- their heart in trusting God through application of the Scriptures;
- the example they might be setting;
- and if they think Jesus would use cannabis recreationally just because it’s legal since as his disciples, we’re striving to be like him.

When it comes to disputable matters, Romans 14 and 15 are useful because they remind us that at the end of the day, everyone must give an account of ourselves to God.

“So then, each of us will give an account of ourselves to God” (Rom. 14:12).

To anyone who says something to the effect of, “Cannabis is not listed in the Bible, so I can fully partake in it recreationally,” I would say, “Come on. Drunkenness doesn’t come just from alcohol. That impaired state. That altered mind. That mind that is not sober and alert. That’s what we’re talking about here.”

So, the idea here is that getting drunk with wine and what the text is teaching are not “don’t have a glass”; it’s about getting drunk. It’s about getting intoxicated. So, that’s kind of a baseline. When we read Scripture that says, “don’t get drunk on wine,” could we not comparably say the same about consuming cannabis in any form (smoking a joint, consuming cannabis oils or cannabis brownies or edibles, etc.)? “Don’t get high on cannabis.”

If someone wants to know if they can smoke a joint, I would say it’s highly unlikely you can smoke a joint and not get high due to the amount of THC that gets absorbed into your body through inhalation. Compare that to alcohol. How much alcohol can you drink before you get drunk or before it’s considered debauchery? Smoking a joint gets you high. If it doesn’t, then you’ve had enough cannabis in your system that you have built up a tolerance. At that point, it’s a whole different conversation about cannabis overuse or abuse.

For most people, drinking a glass or two of wine does not make them drunk. I have unfortunately had several times in my life where I have sinned and had too much alcohol. I

know that for me, two drinks are my limit. Period. Anything over that, and I'm under the influence, altered, not sober, not alert. Yes, drunk. For others, it may be different.

I can tell you this, for the average person, smoking a joint is like getting drunk.

That Scripture also mentions debauchery and so we have to consider this, as well. What are we filling ourselves with? We think about that maybe in terms of food or other things we try to fill our lives with, but I think the Scripture is very apropos for cannabis as well because it hits home very specifically about all the things that impact the generations.

Some may turn to alcohol, others drugs, and cannabis as well, to self-medicate from the stresses and anxieties of life. And this will start you down a slippery slope that is neither effective nor godly behavior. So, don't go there. We know that an answer to those choices is Jesus and being filled with the Holy Spirit. Yet there are no simple solutions like *you should pray more* and *just obey the Bible* for those Christians who are struggling with clinical anxiety and depression or other debilitating medical conditions. That simplistic advice is not going to be effective since these are complex medical disorders that need to be ministered to with God's Word, and with love, grace, mercy—and also with the help of physicians and other trained medical professionals. Let a physician—one who has been specifically trained to help patients using medical cannabis—advise you with regard to whether or not medical cannabis is the safest and most appropriate treatment for you. Don't make that decision on your own.

So as disciples, how do we try to figure this out? What are some scriptural guidelines we can use?

Hopefully the answer to the questions above will be helpful as you navigate this subject for yourselves, in your rela-

tionships with your brother and sisters, and as you reach out to a hurting world.

About the Author

Dr. Sasha Noe's Brief Biography

Sasha Noe, DO, PhD, is a dual doctorate, board-certified, award-winning family medicine physician and researcher, two-time best-selling author, international speaker and expert in preventative medicine, chronic disease management, cannabinoid research and medical cannabis. With the belief that patient education is key in the maintenance of health and in the prevention of illness, Dr. Noe counsels individuals on achieving a happy and healthy lifestyle for their mind, body, and spirit.

After earning her Bachelor of Science in biology with a minor in chemistry at Palm Beach Atlantic University, she went on to earn a master's and doctorate in medical microbiology and immunology at the University of South Florida College of Medicine. In her dissertation, she focused on the cellular and molecular distribution and function of cannabinoid receptor 1 (CB1) in murine immune cells, as well as the role of cannabinoids in HIV infection and replication. Dating back to the mid- '90s, Dr. Noe earned several awards both regionally and nationally for her work in cellular and

molecular cannabinoid research, most notably, the Young Investigators award for her research on cannabinoids and HIV. Over the last two decades, she has presented her research at numerous scientific conferences and societies across the country including the International Cannabinoid Research Society (of which she is currently a member).

After working for several years in academia, Dr. Noe decided to pursue her true calling in medicine. She attended Lake Erie College of Osteopathic Medicine where she earned her Doctor of Osteopathic Medicine (DO) degree. She went on to serve as the chief intern and chief resident of the Family Medicine and Osteopathic Manipulative Treatment program at St. Petersburg General Hospital.

Keeping in step with her entrepreneurial spirit, she started her own medical practice straight out of residency and is now the owner of three private practices in the Tampa Bay Area, including the Compassionate Medical Cannabis Care clinic where she serves her community through her clinic and on a local, national and international level through her educational seminars, conferences (MediCannapodium™), social media outlets (@DrSashaNoe) and her one-of-a-kind MediCanna™ Academy where she educates physicians nationally and internationally on how to safely and effectively treat their patients using medical cannabis.

As the only known physician in the United States with a PhD specifically in the field of molecular cannabinoid research, Dr. Noe is undoubtedly the nation's leading expert in the field of medical cannabis. Her award-winning published research has contributed towards the advancement of the therapeutic potential for cannabis over the last two decades, being referenced nationally and worldwide in numerous scholarly articles and books. It is her life's goal to educate and consult with patients, physicians, and the industry about

medical cannabis while developing safe, maximally effective, therapeutic applications of cannabis *and* improving overall health and wellness by minimizing the use of opioids and other more harmful pharmaceuticals.

Due to her unique qualifications as a physician and as the leading medical cannabis expert, she is sought out by many of her physician peers, as well as patients and cannabis industry leaders as a medical cannabis consultant. She is always looking for innovative ways to serve her community and recently launched her membership-model, direct primary care practice to give patients affordable, accessible, high-quality healthcare. She combines the “small-town doc” experience with modern technology to bring an exceptional experience to her patients. In addition, she continues her lifelong career in research as a sub-investigator with Clinical Research of West Florida, where she is involved in bringing cutting-edge research and medicine to patients.

Dr. Noe has spent numerous years in administrative and leadership positions, including the American Osteopathic Association’s Bureau of Osteopathic Clinical Education and Research, the Board of Trustees, and the Board of Directors for the Florida Society American College of Osteopathic Family Physicians and its foundation, just to name a few. She continues to serve in her osteopathic profession and is the past president of the Hillsborough County Osteopathic Medical Society (HCOMS), where she was the recipient of their Physician of the Year award in 2016 and 2017—the only physician to receive the award two consecutive years. Dr. Noe continues to serve as a member of the Public Relations Committee for the American College of Osteopathic Family Physicians (ACOFP) and has done so for many years. She also currently serves on the board of the Florida Society of Cannabis Physicians (FLSCP) as the chair of the Medical

Advisory Committee and is on the Board of Trustees of the Florida Osteopathic Medical Association.

Dr. Noe has a passion for medical missions and since 1995 has participated in numerous volunteer community service projects and fundraising activities in the Tampa Bay Area, as well as overseas with the HCOMS Jamaica Clinic and as a member of the organization HOPEworldwide, where she has served on its Board of Advisors for the Tampa chapter for many years.

A resident of the Tampa Bay area for over twenty years, and specifically Apollo Beach since 2003, Dr. Noe can be found enjoying her free time with her husband of twenty-six years and her two children. Being from the island of Trinidad in the Caribbean, Dr. Noe appreciates the small-town beauty and lifestyle she finds in the Apollo Beach area and surrounding communities, and she looks forward to raising her family and serving her community here for years to come.